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INTRODUCTION.

This REVIEW treats generally the meteorological conditions of the United States and Canada for February, 1888, and is based upon the reports of regular and voluntary observers of both countries. Descriptions of the storms that occurred over the north Atlantic Ocean are also given, and their paths shown on chart i, on which also appears the distribution of field-ice and the limits of fog-belts west of the fortieth meridian. The weather over the ocean was unusually fine for the season, and the depressions traced were deficient in number and energy, when compared with the record of corresponding months of previous years. A noteworthy feature, unparalleled in the last six years, was an entire absence of icebergs in the vicinity of Newfoundland and the Grand Banks.

In the central and upper portions of the Mississippi valley the month was decidedly colder than the average, and the temperature was generally below the normal in all districts east of the Missouri Valley to the northward of the thirty-fifth parallel. In the Southern States, Rocky Mountain and Pacific coast regions, the mean temperatures were above the normal, the departures being unusually marked in northern Rocky Mountain districts, where they amounted to 10°.

In connection with the monthly precipitation, the most important feature was the large deficiency on the Pacific coast, in the lower lake region, Ohio and central Mississippi valleys, in which districts the precipitation fell short of the average from 25 to 65 per cent.

In this REVIEW are given extracts from the monthly reports of twenty state weather services, and also from the report of the New England Meteorological Society, the territory of the latter embracing the six New England states; this is the largest number of reports of local meteorological associations that have so far been received in time to be incorporated in the REVIEW.

In the preparation of this REVIEW the following data, received up to March 20, 1888, have been used, viz., the regular tri-daily weather-charts, containing data of simultaneous observations taken at 133 Signal Service stations and 24 Canadian stations, as telegraphed to this office; 177 monthly journals and 174 monthly means from the former and 24 monthly means from the latter; 307 monthly registers from voluntary observers; 60 monthly registers from United States Army post surgeons; marine records; international simultaneous observations; marine reports through the co-operation of the Hydrographic Office, United States Navy, and the "New York Herald Weather Service;" monthly weather reports from the local weather services of Alabama, Arkansas, Colorado, Illinois, Indiana, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New England, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, and Tennessee, and the Central Pacific Railway Company; trustworthy newspaper extracts, and special reports.

ATMOSPHERIC PRESSURE (expressed in inches and hundredths).

The distribution of mean pressure for February, 1888, determined from the tri-daily telegraphic observations of the Signal Service, is shown by isobarometric lines on chart ii.

The mean pressure for the month is greatest in the northern and central Pacific coast regions and in the adjacent portions of the plateau region, the area of maximum mean pressure being inclosed by the isobar of 30.15. The mean pressure is least in Arizona, New Mexico, and western Texas, and in the extreme northeastern Canadian Provinces, where the monthly barometric means fall to 30.0, or slightly below. Over much the larger part of the United States the mean pressures range from 30.05 to 30.1. The extreme monthly means are: highest, 30.18, at Fort Bidwell, Cal.; lowest, 29.98, at Sydney, N. S.

The departures from the normal pressure at the various Signal Service stations are given in the table of miscellaneous meteorological data. Although comparison of the mean pressure of the current month with the February normal shows a general deficiency over nearly the whole country, the departures are nowhere very marked, being less than .05 in all districts, except in the Gulf States and on the Atlantic coast south of Virginia, where they range from .05 to .10. On the north Pacific coast, and in northern New England, the mean pressure is slightly above the normal.

As compared with the mean pressure of the preceding month, an increase occurs along the north Pacific coast and in

northeastern New England and the Maritime Provinces. In the first named district the increase ranges from .10 to .14 at stations near the coast, and in the latter, from .06 at Eastport, Me., to .19 at Sydney, N. S. In all other portions of the country the mean pressure of February is below that of January; over the entire region between the seventy-seventh and one hundred and seventeenth meridians the deficiency exceeds .10, and between the ninetieth and one hundredth meridians it amounts to .20, or more.

BAROMETRIC RANGES.

The monthly barometric ranges at the various Signal Service stations are also given in the table of miscellaneous meteorological data. The ranges, as usual, conform to the general rule, that is, they increase with the latitude and decrease slightly, though somewhat irregularly, with increasing longitude. In the states bordering on the Atlantic the extreme ranges are .43 at Key West, Fla., and 1.16 at Eastport, Me.; between the eightieth and ninetieth meridians, .59 at Cedar Keys, Fla., and 1.78 at Mackinaw City, Mich.; eastern slope of the Rocky Mountains, .79 at Fort Davis, Tex., and 1.23 at Poplar River, Mont.; plateau region, .49 at Yuma, Ariz., and .97 at Walla Walla and Spokane Falls, Wash.; Pacific coast, .45 at San Diego, Cal., and 1.39 at Port Angeles, Wash. In the upper lake region the ranges for February, 1888, exceed